

DOCUMENT RESUME

ED 261 586

HE 018 680

AUTHOR Trubac, Edward; And Others
TITLE Economic Impact. Study of Independent Higher Education in Indiana.
INSTITUTION Associated Colleges of Indiana, Indianapolis.; Independent Colleges and Universities of Indiana, Inc.
SPONS AGENCY Lilly Endowment, Inc., Indianapolis, Ind.
PUB DATE Jan 75
NOTE 48p.; For related documents, see HE 018 677-682.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS College Faculty; College Students; *Economic Factors; *Employment Opportunities; Expenditures; Higher Education; *Private Colleges; Purchasing; Questionnaires; *School Business Relationship; *School Community Relationship; School Personnel
IDENTIFIERS *Economic Impact; *Indiana

ABSTRACT

The economic impact of private higher education in Indiana was studied, as part of a larger study. For the 32 institutions covered, expenditure data were collected for faculty and staff, students, visitors, and the college itself. In 1972-1973, the 32 institutions spent \$45.9 million in the state, of which \$34.6 million was spent in the local communities. The 9,600 individuals employed by the 32 schools supported 20,000 jobs in the state. The average expenditure per school was approximately one million dollars; however, the totals varied considerably between schools. The overall statewide economic impact of institutions in heavily populated areas appeared to be no different from institutions in less-populated communities. Nearly 30 percent of institutional expenditures were on capital items. Faculty and staff members spent more than \$50 million a year within the state, 89 percent of which was in their local communities. Students spent \$38 million a year attending private colleges. About 40 percent of the schools had statewide college related expenditures that were between \$2,256 and \$3,000 per full-time student. Student spending levels, on an individual basis, were significantly lower in rural than in urban communities. Expenditure data for each school are provided, along with notes on the research methodology. (SW)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

E0261586

Study of Independent Higher Education in Indiana

William W. Jellison, Director

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY
William W. Jellison
Jellison
TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
✓ This document has been reproduced as
received from the person or organization
originating it.
Minor changes have been made to improve
reproduction quality.
• Points of view or opinions stated in this docu-
ment do not necessarily represent official NIE
position or policy.

ECONOMIC IMPACT

A Report To The
Associated Colleges of Indiana
And The
Independent Colleges and Universities of Indiana, Inc.
By The
Study of Independent Higher Education in Indiana

William W. Jellema, Director
James Olliver, Assistant Director

January, 1975

Additional copies of this report may be purchased at the cost of two dollars and fifty cents (\$2.50) per copy from:

Associated Colleges of Indiana
908 Merchants Bank Building
Indianapolis, IN 46204

OR Independent Colleges and Universities
of Indiana, Inc.
306 Guaranty Building
Indianapolis, IN 46204

The Study of Independent Higher Education in Indiana was supported by a grant from the Lilly Endowment, Inc. The positions expressed herein do not necessarily reflect the policies of the Endowment, the Associated Colleges of Indiana, or the Independent Colleges and Universities of Indiana, Inc.

All rights reserved. No part of this report may be reproduced or used in any form without permission of the Associated Colleges of Indiana and the Independent Colleges and Universities of Indiana, Inc.

TABLE OF CONTENTS

FOREWORD	i
CHAPTER I SUMMARY	
Main Findings	I-2
Local Variations	I-8
Conclusion	I-10
CHAPTER II COLLEGE AND UNIVERSITY EXPENDITURES	
Total Expenditures	II-1
Expenditures on Capital Items	II-3
CHAPTER III EXPENDITURES BY FACULTY AND STAFF	
Total Expenditures	III-1
Expenditures for Shelter	III-2
Nonshelter Expenditures	III-2
CHAPTER IV EXPENDITURES BY STUDENTS	
Total Expenditures	IV-1
Nonhousing Expenditures	IV-1
Imported Funds	IV-2
Economic Roles	IV-2
CHAPTER V EXPENDITURES BY VISITORS	
Expenditures in the Local Community	V-1
Categories of Impact	V-1
CHAPTER VI MULTIPLIER EFFECTS	
Far-Reaching Implications of Direct Expenditures	VI-1
Income Multiplier	VI-2
Employment Multiplier	VI-5
APPENDIX METHODOLOGICAL NOTES	

7
TABLE OF TABLES

1. College-Related Local Expenditures	I-3
2. College-Related Nonlocal Expenditures	I-4
3. Total In-State College-Related Expenditures	I-5
4. Local and Statewide Expenditure Impact of Selected Schools in Lightly Populated Communities	II-2
5. Local and Statewide Expenditure Impact of Selected Schools in More Heavily Populated Communities	II-2
6. Local and Overall In-State Expenditures of Faculty and Staff	III-1
7. Estimated Nonshelter Expenditures of Faculty and Staff	III-3

TABLE OF FIGURES

1. College-Related Local Expenditures by Expenditure Groups	I-6
2. Total In-State College-Related Expenditures By Expenditure Groups	I-6
3. Local Expenditures by Type of Expenditure	I-7
4. In-State Expenditures by Type of Expenditure	I-7

FOREWORD

The Study of Independent Higher Education in Indiana was commissioned by the Associated Colleges of Indiana and the Independent Colleges and Universities of Indiana, Inc., whose joint boards acted as a steering committee* to provide overall direction for the Study.

Underwritten by the Lilly Endowment, Inc., the Study had, as its major purposes, to enable both the sector as a whole and individual institutions to understand themselves better; and, as a consequence of that understanding, present themselves and their case to the public and to their various constituencies articulately; and, further, to lay the basis and develop the local expertness for the systematic continuing collection of data to satisfy these continuing needs for self-understanding and articulation.

In its year of operation the Study produced six reports on studies that were useful at both the sector level and at the individual institution level. These reports concern themselves with:

Institutional Goals

Cost of Instruction

Student Characteristics and Finances

Financial Health

Interinstitutional Cooperation

Economic Impact

The principal authors of this report on the economic impact of private colleges and universities on their local communities and on the state were Professors Edward Trubac and Dennis Dugan, of the University of Notre Dame, assisted by Michael Murray. They were also assisted by professors of economics and business managers at each individual college or university. Their report was modified (with the assistance of Dr. George Mowbray of Toronto, Canada) to accommodate the needs of widespread distribution but theirs is the major credit for the economic impact study itself as well as for the drafting of the report, and none of the blame for the modifications.

In the course of the whole Study I have been most ably assisted by James Olliver, as we have been assisted, each in turn, by Elizabeth Shelby, Harriet O'Connor, and Beverly Patterson.

William W. Jellema
Director

January, 1975

* Members of the Steering Committee:

Reverend Charles Banet, President, St. Joseph's College
Dr. Richard M. Bateman, President, Tri-State College
Reverend James T. Burtchaell, C.S.C., Provost,
University of Notre Dame
Dr. Woodrow Goodman, President, Marion College
Dr. Wallace B. Graves, President, University of
Evansville
Dr. John E. Horner, President, Hanover College
Dr. A. G. Huegli, President, Valparaiso University
Dr. Alexander E. Jones, President, Butler University
Dr. John A. Logan, President, Rose-Hulman Institute of
Technology
Dr. John Z. Martin, Executive Director, Associated Colleges
of Indiana
Dr. Robert E. Martin, President, Independent Colleges &
Universities of Indiana, Inc.
Dr. Robert H. Reardon, President, Anderson College
Dr. Milo A. Rediger, President, Taylor University
Dr. Gene E. Sease, President, Indiana Central College
Dr. Timothy M. Warner, President, Fort Wayne Bible College

CHAPTER I

SUMMARY

Although a college or university has widely recognized social functions in its community and in the society at large, it is often not appreciated by the public as a business enterprise. Such an institution reaps many practical business benefits for its community and its state. It creates jobs by employing people to teach and administer. It purchases goods of many kinds to build and operate its facilities. It attracts students and visitors from near and far. These people spend money in the college community and in the state--money that might not otherwise have been spent there.

Furthermore, the ultimate economic consequences of spending are greater than the original impetus. Recipients of the first-round expenditures also spend part of the money--some of it locally and some at more distant points. Each successive round of receipts and expenditures creates an added impact: it generates new incomes and job opportunities that would not otherwise have materialized. In these more labyrinthine ways, too, the institution contributes to the economic health both of the local community and of the state. This study measures such economic impacts.

Indiana has 32 privately funded colleges and universities. These schools largely operate on nontax dollars. If Indiana taxpayers had to finance teaching and research operations in this private sector, they would incur a substantial new burden. Almost half of the students who attend these schools come from outside Indiana. In this sense, the private educational sector is an important export industry for the state, as well as a source of both pride and economic benefit to many localities within the state.

In researching the economic impacts of private higher education in Indiana, we secured information from a broad sample of the 32 institutions. We arranged for surveys of student and faculty-staff expenditures, and consulted a number of other studies of this type as well as government reports on patterns of personal spending. To obtain the impact statistics, we collected expenditure data on four major groups: faculty and staff; students (including their expenditures for food, shelter, transportation, clothing, medical care, etc.); visitors (expenditures of persons who visit the campuses for academic, business, personal, cultural,

or recreational reasons); and the college itself (including utilities, food, capital equipment, maintenance and repair, supplies, etc.). To avoid double counting, faculty and staff salaries are not listed as a college expenditure.¹ Faculty and staff expenditures of their salaries are themselves separately examined. Analogously, student payments of tuitions and fees to the institutions they attend are excluded.

MAIN FINDINGS

The study's main findings are as follows (see tables 1, 2, and 3, and figures 1 and 2, below):

- a. The 32 independent colleges and universities of Indiana in fiscal 1973 were directly responsible for additional in-state expenditures of \$252 million per year--from their own day-to-day operations and from expenditures by their faculties, staff, students, and visitors. The first-round figure for the outlays totalled \$169 million in the study year.
- b. Of the \$169 million, about 90 percent was spent in the local area of the school. In terms of impact on the local areas, the local "multiplier" indicates an aggregate effect of \$211 million.
- c. The 9,600 people employed by the 32 schools support approximately 20,000 jobs in the state.
- d. Sources of college-related expenditure can be categorized as follows:

	<u>Amount</u> (\$ Millions)	<u>% Total</u>
Institutions Themselves	\$45.9	27%
Faculty-Staff (9,600)	51.9	31
Students (41,000)	38.1	22
Visitors	<u>33.4</u>	<u>20</u>
In-State Total	\$169.3	100%

¹ A more detailed analysis of the model definitions and procedures followed in this study can be found in the appendix of this report.

TABLE 1: COLLEGE-RELATED LOCAL EXPENDITURES BY PRIVATE COLLEGES AND UNIVERSITIES IN INDIANA, 1972-73
(In Thousands of Dollars)

	<u>INSTITUTION</u>	<u>FACULTY/STAFF</u>	<u>STUDENTS</u>	<u>VISITORS</u>	<u>TOTAL</u>
Anderson	\$1512	\$1128	\$1643	\$463	\$4746
Bethel	371	300	479	134	1284
Butler	2367	2612	3833	962	9774
Calumet	131	274	363	116	884
Concordia	595	498	279	74	1446
DePauw	804	2639	1042	618	5103
Earlham	913	1541	1332	381	4167
Fort Wayne Bible	345	317	281	148	1091
Franklin	179	596	637	162	1574
Goshen	832	1156	677	383	3048
Grace	181	463	823	181	1648
Hanover	780	1074	274	345	2473
Huntington	131	557	195	155	1038
Indiana Central	2252	960	1148	1283	5643
Ind. Inst. of Tech.	116	609	1086	294	2105
Manchester	375	1136	716	442	2669
Marian	931	449	1206	303	2889
Marion	654	454	375	225	1708
Northwood Institute	73	173	190	33	469
Oakland City	398	549	140	176	1263
Rose-Hulman	544	1031	1203	278	3056
St. Francis	130	684	1219	330	2363
St. Joseph's	504	817	428	140	1889
St. Mary's	1144	1602	450	575	3771
St. Mary-of-the-Woods	589	387	182	132	1290
St. Meinrad	272	114	68	93	547
Taylor	469	1144	484	478	2575
Tri-State	670	1067	1449	258	3444
U. of Evansville	2731	3119	4206	1035	11091
U. of Notre Dame	11498	13968	7777	21764	55007
Valparaiso	1711	3600	3434	1103	9848
Wabash	443	1301	452	328	2524
<u>TOTAL</u>	<u>\$34645</u>	<u>\$46319</u>	<u>\$38071</u>	<u>\$33392</u>	<u>\$152427</u>

TABLE 2: COLLEGE-RELATED NONLOCAL EXPENDITURES BY PRIVATE COLLEGES AND UNIVERSITIES IN INDIANA, 1972-73
(In Thousands of Dollars)

	<u>INSTITUTION</u>	<u>FACULTY/STAFF</u>	<u>TOTAL</u>
Anderson	\$295	\$103	\$398
Bethel	21	43	64
Butler	281	399	680
Calumet	143	29	172
Concordia	50	36	86
DePauw	769	512	1281
Earlham	609	140	749
Fort Wayne Bible	56	19	75
Franklin	247	116	363
Goshen	42	37	79
Grace	197	100	297
Hanover	120	144	264
Huntington	278	47	325
Indiana Central	-	40	40
Ind. Inst. of Tech.	23	465	488
Manchester	789	135	924
Marian	62	80	142
Marion	146	107	253
Northwood Institute	98	35	133
Oakland City	61	73	134
Rose-Hulman	578	173	751
St. Francis	26	82	108
St. Joseph's	481	147	628
St. Mary's	607	142	749
St. Mary-of-the-Woods	123	66	189
St. Meinrad	46	37	83
Taylor	903	266	1169
Tri-State	540	99	639
U. of Evansville	269	31	300
U. of Notre Dame	489	1104	1593
Valparaiso	1865	392	2257
Wabash	1067	378	1445
<u>TOTAL</u>	<u>\$11281</u>	<u>\$5577</u>	<u>\$16858</u>

TABLE 3: TOTAL IN-STATE COLLEGE-RELATED EXPENDITURES BY PRIVATE COLLEGES AND UNIVERSITIES IN INDIANA, 1970-71
(In Thousands of Dollars)

	INSTITUTION	FACULTY/STAFF	STUDENTS	VISITORS	TOTAL	FT STUDENTS	TOTAL PER STUDENT
Anderson	\$1807	\$1231	\$1643	\$463	\$5144	1435	\$3584
Bethel	392	343	479	135	1349	319	4228
Butler	2648	3011	3833	962	10454	2154	4853
Calumet	274	303	363	116	1057	780	1354
Concordia	645	534	278	75	1532	376	4074
DePauw	1573	3151	1042	619	6385	2188	2918
Earlham	1522	1681	1332	381	4916	1150	4274
Fort Wayne Bible	401	336	282	148	1167	406	2875
Franklin	426	712	637	162	1937	659	2939
Goshen	874	1193	677	383	3127	1092	2863
Grace	378	563	823	182	1946	748	2601
Hanover	900	1218	274	345	2738	994	2754
Huntington	409	604	196	155	1364	454	2655
Indiana Central	2252	1000	1148	1283	5684	1079	5268
Ind. Inst. of Tech.	139	1074	1086	295	2594	507	5116
Manchester	1164	1271	717	443	3595	1295	2775
Marian	993	529	1206	303	3032	678	4472
Marion	800	561	375	225	1961	609	3220
Northwood Institute	171	208	191	33	604	211	2860
Oakland City	459	622	140	176	1398	514	2719
Rose-Hulman	1122	1204	1204	278	3808	1132	3363
St. Francis	156	766	1219	331	2472	577	4284
St. Joseph's	985	964	428	140	2516	1115	2256
St. Mary's	1751	1744	450	576	4521	1450	3119
St. Mary-of-the-Woods	712	453	182	133	1479	361	4097
St. Meinrad	318	151	68	93	631	234	2696
Taylor	1372	1410	485	478	3745	1395	2684
Tri-State	1210	1166	1449	258	4083	1278	3194
U. of Evansville	3000	3150	4206	1036	11392	2774	4106
U. of Notre Dame	11987	15072	7777	21765	56601	8524	6638
Valparaiso	3576	3992	3435	1104	12105	3653	3314
Wabash	1510	1679	452	328	3970	743	5342
<u>TOTAL</u>	<u>\$45926</u>	<u>\$51896</u>	<u>\$38077</u>	<u>\$33404</u>	<u>\$169307</u>	<u>40884</u>	<u>\$4141</u>

FIGURE 1
COLLEGE-RELATED LOCAL EXPENDITURES BY
PRIVATE COLLEGES AND UNIVERSITIES IN INDIANA, 1972-73

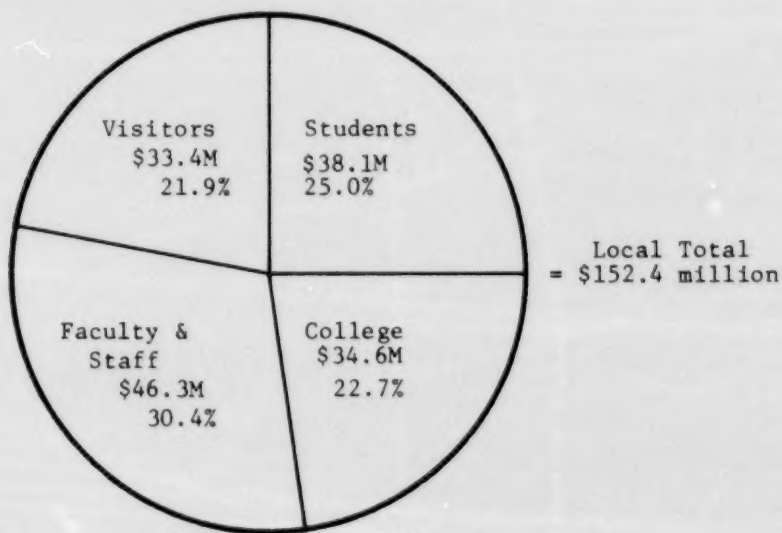


FIGURE 2
TOTAL IN-STATE COLLEGE-RELATED EXPENDITURES BY
PRIVATE COLLEGES AND UNIVERSITIES IN INDIANA, 1972-73

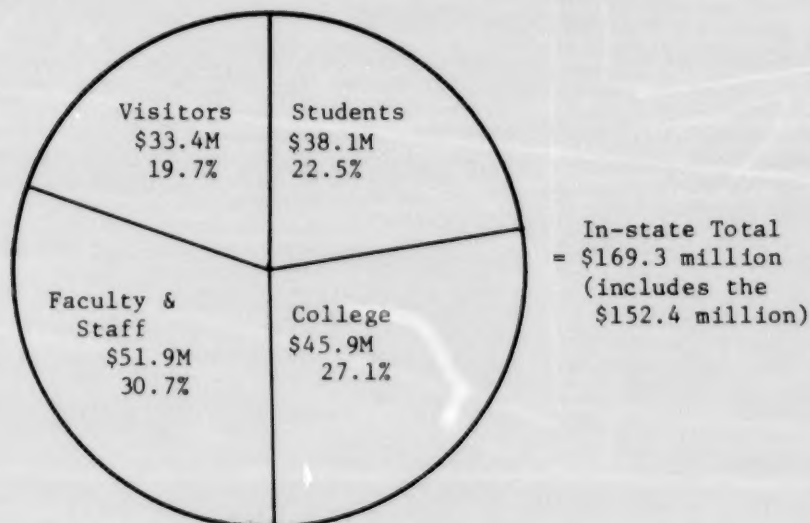


FIGURE 3
LOCAL EXPENDITURES BY PRIVATE COLLEGES AND
UNIVERSITIES IN INDIANA BY TYPE OF EXPENDITURE, 1972-73

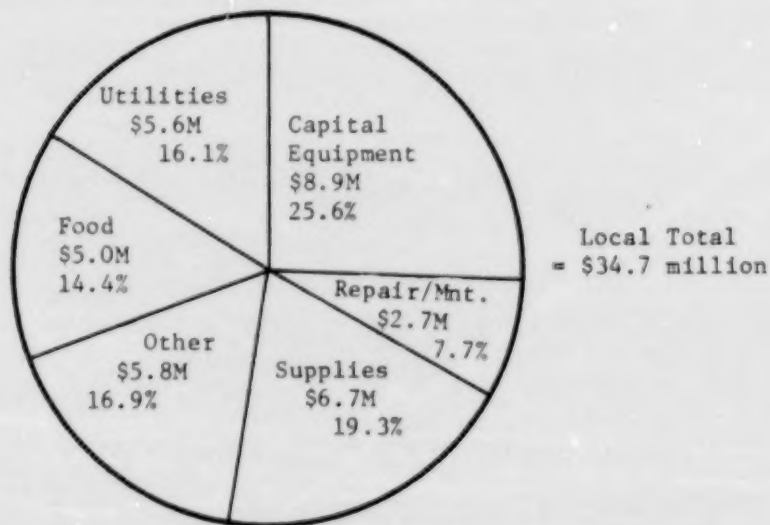
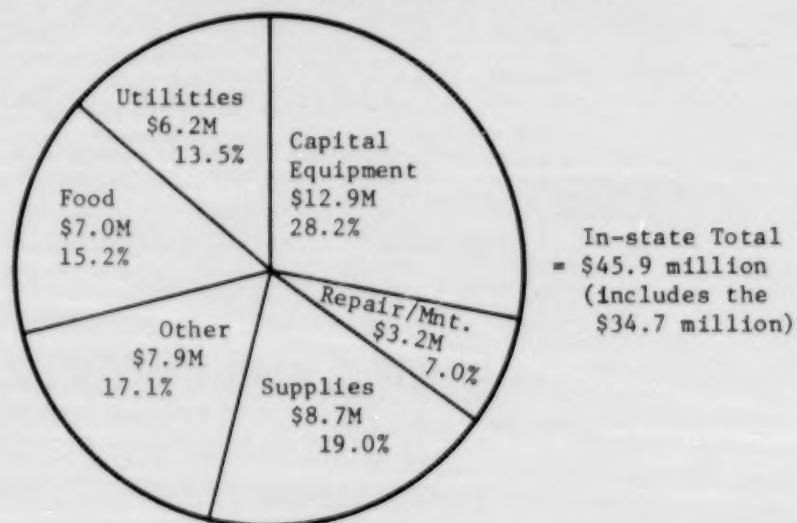


FIGURE 4
IN-STATE EXPENDITURES BY PRIVATE COLLEGES AND UNIVERSITIES
IN INDIANA BY TYPE OF EXPENDITURE, 1972-73



LOCAL VARIATIONS

The economic impact of a college or university varies with both its size and its location, and the impact, both local and state, will be affected. Schools near several communities will have their impacts spread over these communities as well as over the one in which they are located. Others, near the state border, will have significant spill-over effects on out-of-state localities.

In Indiana, the University of Notre Dame is by far the largest institution in private higher education. In both aggregate effects (\$56.6 million) and in impact per full-time student (\$6,638), it represents a sizeable proportion of the total impact of the sector on the state and specifically on South Bend. In aggregate terms, Notre Dame's impact is 33 percent of private higher education's total direct and indirect economic impact. Another indication of Notre Dame's impact is that it is equal to that of the seven next largest institutions combined.

On the other hand, the smaller institutions are also important in their own communities, if on a smaller scale. The 32 schools range down in size to two with economic impacts of less than a million dollars a year. In terms of per-student effects, the range is from the \$6,638 of Notre Dame to \$1,354 at Calumet College.

The variations, of course, are related to a combination of enrollment size and the composition of educational programs: the larger and more varied the complexion of the institution, the larger will be its direct and indirect economic impact on the local and state economies.

Northwood Institute with just 211 full-time students had statewide college-related expenditures of \$603,625, while Notre Dame with 8,600 full-time students had corresponding expenditures of more than \$56 million. Trailing Notre Dame was Valparaiso University with in-state impacts totalling \$12 million and Butler University with \$10.5 million. The amounts in most of the schools ranged between one and three million dollars.

However, when these dollar figures were computed on a per-student basis (full-time students), the range of results narrowed considerably. The University of Notre Dame retained its top ranking, but a number of other schools were close to it in the range of \$4,500 to \$5,000. Moreover, Valparaiso University, which ranked second behind Notre Dame in absolute dollars, exceeded only slightly the per-student figure at Northwood Institute.

About 40 percent of the schools had statewide college related expenditures that were between \$2,256 and \$3,000 per full-time student. These included DePauw University, Fort Wayne Bible College, Franklin College, Goshen College, Grace College, Hanover College, Huntington College, Manchester College, Northwood Institute, St. Joseph's College, St. Meinrad College, and Taylor University. Almost all of these schools are located in relatively rural communities. In the section on student expenditures in the local community, we note that student-spending levels, on an individual basis, were significantly lower in rural than in urban communities. In a similar vein, most of the schools where college-related expenditures in Indiana were more than \$4,000 per full-time student were located in communities of a more urban character. Included in this latter category were Bethel College, Butler University, Concordia Senior College, Earlham College, Indiana Institute of Technology, Marian College, St. Francis College, University of Evansville, and the University of Notre Dame. It appears, therefore, that once we take into account both the size of the institution, as expressed by the number of full-time students, and to a lesser degree the urban or rural character of the local community in which it is located, we account for a good part of the variations in college-related expenditures among the various schools.

Of course, there are a number of cases where significant expenditure differences remain, even after one takes into account both of the variables cited above. For example, in-state college-related expenditures per full-time student are \$5,342 at Wabash College but are only \$2,863 at Goshen College. In other words, while both are located in similar kinds of local communities, the per-student expenditures of Wabash College are almost twice as large as those of Goshen. However, further analysis reveals that although Goshen has about 300 more full-time students than Wabash, its in-state college expenditures are only about half those of Wabash College. A closer analysis of the available data revealed that most of this difference could be attributed to higher capital expenditures at Wabash. As indicated elsewhere, differences in capital expenditures accounted for most of the variation in expenditures by the various colleges and universities. In this case, the variation was large enough to indicate a significant difference in overall statewide college-related expenditures per student for the two schools.

CONCLUSION

In addition to their cultural value, colleges and universities in the private sector play an important part in the economic life of their communities and of the state. Like other nonprofit organizations they contribute to the general level of economic activity in their area, and hence deserve to be accorded the same kind of attention in development plans and judgments as any other kind of enterprise. More specifically, the tax concessions they enjoy are requited in more than just the educational mode. In addition to the social values of these institutions, they also contribute directly to the economic welfare of their communities.

CHAPTER II

COLLEGE AND UNIVERSITY EXPENDITURES

THE 32 PRIVATE COLLEGES AND UNIVERSITIES OF INDIANA SPENT \$45.9 MILLION IN THE STATE IN 1972-73--75% LOCALLY

The bulk of the operating budgets¹ for goods and services in the private Indiana institutions of higher learning are spent locally for in-state resources. Of the total annual outlay of \$45.9 million within the state, 75% (\$34.6 million) is spent in the local communities, and the remaining 25% (\$11.3 million) is spent within the state but outside the local community.

Of the four main spending groups in this study--the institutions themselves, their faculties and staffs, students, and visitors--the institutions accounted for 27% of the total outlays for all groups.

The average expenditure per school was approximately one million dollars. But, as might be expected, the totals varied considerably between schools. Notre Dame was by far the largest, accounting for one-third of the total of all the 32 institutions. The University's emphasis on research, especially in the sciences, its large student body (8,600 full-time students), and its attractions as a convention and sports center, all contributed to this high level of economic impact.

The size of the surrounding college community has an understandable effect on the degree of localization of institutional expenditures: the smaller communities cannot supply a wide range of materials and equipment for college operations. However, this also means that the in-state (nonlocal) total is likely to be correspondingly larger, as the figures in table 4, below, suggest.

¹ For details on the sources of revenue and the patterns of operating expenditure in the participating schools, see the Study's report, Financial Health.

II-2

Table 4

LOCAL AND STATEWIDE EXPENDITURE IMPACT
OF SELECTED SCHOOLS IN LIGHTLY
POPULATED COMMUNITIES

	Local Expenditures As a % of Total	In-State Expenditures As a % of Total
DePauw University	27.6%	54.0%
Franklin College	36.0	86.0
Manchester College	23.8	73.9
Tri-State College	37.2	67.2
Taylor University	21.4	62.4
Wabash College	21.3	72.6

Where the college is located in a more heavily populated area, with a larger and more diversified economic base, the local proportions are, for the most part, notably higher (see table 5). However, the overall statewide impact of institutions in heavily populated areas appears to be no different from institutions in thinly populated communities.

Table 5

LOCAL AND STATEWIDE EXPENDITURE IMPACT
OF SELECTED SCHOOLS IN MORE
HEAVILY POPULATED COMMUNITIES

	Local Expenditures As a % of Total	In-State Expenditures As a % of Total
Butler University	74.3%	83.1%
University of Notre Dame	63.0	66.0
University of Evansville	79.6	87.5

A comparison of the tables strongly suggests that while the size of the local economic base critically influences the relative magnitude of the local impact of a college's expenditures, the local economic base appears to have little or no effect on the relative amount of the statewide spending impact by the college. For example, the local outlays of Franklin College amounted to only 36 percent of its total expenditures, but the proportion rose dramatically to 86 percent when we looked at its statewide spending. The University of Evansville, on the other hand, located in a large metropolitan area, distributed 79.6 percent of its total expenditures in the local community. However, its total state impact was about equal to that of Franklin College.

NEARLY 30 PERCENT OF INSTITUTIONAL
EXPENDITURES ARE ON CAPITAL ITEMS

In the study year fiscal 1973, the 32 institutions spent a total of \$12.9 million on capital items. This sum represented 28 percent of their in-state expenditures. All but \$4 million of the money was spent in their local communities. These and other allocations are described in figures 3 and 4 for local and overall in-state expenditures.

Utilities, as one might expect, were mostly in the form of local outlays. Food and institutional supplies were also purchased to a considerable degree locally, although 28 and 23 percent respectively of the purchases came from nonlocal sources. Repair and maintenance outlays, with their high local labor content, were also for the most part directed to the surrounding community.

Outlays in most of the categories, and especially in food and institutional supplies, were directly proportional to the size of the purchasing institution. But there were wide variations in capital spending not directly related to institutional size. Capital spending accounted for most of the spending differences by the institutions that could not be explained by the size of the institution. Local capital purchases, as distinct from those made in more distant cities, also varied in significance and tended to be larger in the larger college municipalities. On the other hand, utility expenditures were relatively fixed for any given size of institution.

CHAPTER III
EXPENDITURES BY FACULTY AND STAFF

FACULTY AND STAFF MEMBERS OF THE
PRIVATE COLLEGES AND UNIVERSITIES
OF INDIANA SPEND MORE THAN \$50
MILLION A YEAR WITHIN THE STATE,
89 PERCENT OF THAT IN THEIR LOCAL
COMMUNITIES

As indicated in table 6 below, the faculty and staff members of Indiana's 32 independent institutions of higher learning spent \$51.9 million in the state during the 1972-73 study year, \$46.3 million of this within their local communities.

Table 6
LOCAL AND OVERALL IN-STATE EXPENDITURES
OF FACULTY AND STAFF, 1972-73

	<u>Local</u>	<u>Overall in State</u>
Shelter Expenditures	\$ 8,830,000	\$ 9,450,000
Nonshelter Expenditures	<u>37,500,000</u>	<u>42,450,000</u>
Total Expenditures	\$46,330,000	\$51,900,000

We took these data directly from payroll information supplied by almost all of the 32 independent institutions in the state, and supplemented these data with estimates about the remaining institutions. The statistics we report deduct twenty percent of gross income for such items as taxes, savings, and retirement funds. This ensures that our estimate of the economic impact of faculty and staff expenditures is on the conservative side.

Colleges and universities exhibit some spending differences not related to the number of faculty and staff employed. Average salaries account for some of the variation. The remainder is attributable to factors such as variation in the proportion of total expenditures spent locally and in the proportion of faculty and staff living in the local community. Whether the college was located in a lightly populated community did not appear

to make much difference in the proportion of faculty and staff expenditures made locally. This was not the case with outlays by the schools themselves: the size of the community made a great difference in the proportion of local expenditures made by a college or university compared with its statewide expenditures.

FACULTY AND STAFF EXPENDITURES FOR
SHELTER REPRESENTED 18 PERCENT OF
TOTAL OUTLAYS, WITH THE BALANCE FOR
OTHER CONSUMPTION ITEMS

Of the \$51.9 million total faculty and staff outlay for consumer goods and services, \$9.5 million was spent on shelter (18%)¹ and the balance of \$42.5 million on non-shelter items according to a breakdown suggested by the Department of Labor, Bureau of Labor Statistics. We reviewed these data, compiled for the North Central Region of the United States² and selected a figure of \$11,000 as representing the average income received by university members included in the study. Residents of smaller centers were differentiated from those in more densely populated centers such as South Bend and Indianapolis.

NONSHELTER

Table 7 shows averaged data for metropolitan and non-metropolitan areas indicating the proportions of income spent on various nonshelter items. These personal expenses vary little with personal income, the higher income families tending to spend more on services and durables and the lower income families proportionately more on food and shelter.

¹ This figure excludes payment of principal on homeowners' mortgages, and includes rents. See Appendix for details of methodology.

² U.S. Department of Labor, Bureau of Labor Statistics, 3 Budgets for an Urban Family of Four Persons 1969-70, Supplement to Bulletin 1570-5 (Washington, D.C.: 1972), Table A-5, Page 14.

Table 7

ESTIMATED NONSHELTER EXPENDITURES OF
FACULTY AND STAFF, 1972-73

<u>Category of Expenditure</u>	<u>Amount</u> (\$ Millions)
Food	\$16.5
Transportation	6.8
Clothing and Personal Care	7.7
Medical Care	3.8
Other Family Consumption	4.3
Other Costs	<u>3.4</u>
Total Nonselter	\$42.5

CHAPTER IV
EXPENDITURES BY STUDENTS

STUDENTS SPEND \$38 MILLION
A YEAR ATTENDING PRIVATE
INDIANA COLLEGES AND UNIVERSITIES
AND ALMOST ALL OF IT IS SPENT
IN THEIR COLLEGE COMMUNITY

As other economic impact studies have shown, student expenditures are one of the key elements in an institution's economic impact on the local community.¹ The vast majority of students live, either temporarily or permanently, quite near their place of study. In the case of Indiana, students spend some \$38 million a year on housing and nonhousing expenses.

With a full-time 1972-73 enrollment of 41,000, this means an average 1972-73 outlay of \$930 per student. The precise amount varied considerably depending on the location of the college or university. Expenditures for both housing and nonhousing items were larger in urban areas than in smaller centers; for example, an average per student of \$2,600 at Butler University and only \$1,437 at Wabash College.

NEARLY TWO-THIRDS OF THE TOTAL
WENT FOR NONHOUSING EXPENDITURES:
\$23.5 MILLION

A good many students at Indiana institutions live at home, and others live in on-campus accommodations. About 50 percent of the student body in the Indiana private sector comes from out of state. Under such circumstances, a substantial minority of students live in off-campus housing; this represents the \$14.6 million balance of the total student outlays of \$38.1 million, the first \$23.5 million being spent on things other than accommodations.

¹ For additional details on the student bodies, see the Study's report, Student Characteristics and Finances.

INDIANA PRIVATE INSTITUTIONS
INDUCE A LARGE ANNUAL IMPORTATION
OF STUDENT FUNDS: ABOUT \$18 MILLION

The education of students who come to Indiana schools from outside the state is a form of state export activity directed towards residents of other jurisdictions. This export, an invisible one, is paid for with student fees, in the main.

Since half of the private sector's students come from outside the state, half of total student expenditures of \$38.1 million in 1972-73 came indirectly from other jurisdictions. The computed amount is \$18.2 million. It represents a significant contribution to the communities in which the schools are located.

FURTHER REFLECTIONS ON THE
ECONOMIC ROLES OF STUDENTS IN A
COLLEGE COMMUNITY

In what immediately precedes we have been concerned primarily with the students as generators of direct additional money flows in their college or university communities. The students are clearly the reason for the existence of the schools, which teach them, engage in research to improve the quality of their education as well as to benefit the larger community, and which provide them with a vast array of materials and professional services.

Student fees and other income associated with students have a fundamental influence on the whole level of post-secondary educational activity. Tuition and fees help pay salaries, provide accommodation and food in dormitories, and finance college purchases. The infusion of money stemming from educational operations has an extended impact on the surrounding community. In many ways, therefore, the existence of a student population enhances the local community and its economy. The prosperity of a community buttressed by a college campus engenders further development of noneducational business. And so the multiple economic effects of the educational delivery system spread throughout the region.

Students also attract visitors to their campus town: friends from other schools who come to visit them; parents and relatives who come to see the younger generation at school, buy them gifts, add to their wardrobes, entertain them at local establishments, and so on. None of these economic stimuli would be felt by the college town if its student body were going to school somewhere else.

Students, too, are the ultimate source of many other kinds of commercial activity in the college and university centers. None of the visiting academicians, trades people, builders, designers, supply salesmen, equipment specialists, and the many other people drawn to educational centers would appear in town, probably, if it were not for the institutions serving the needs of students.

Part-time students also play a role in the economic life of the college or university community. For the most part they affect the college scene in ways not directly related to the kind of economic impacts we are discussing in this report. Most of them are local residents, and most are either working or are engaged in domestic occupations such as raising a family. Their going to college does not create cash flows of the type generated by students from out of town. This is not to say, however, that part-time students do not have an economic effect on the educational system and the community. In many cases their tuitions are critical elements in college and university revenues. In this sense, they support the colleges and universities and thus, indirectly, many of the economic consequences of the continued existence of these institutions.

CHAPTER V
EXPENDITURES BY VISITORS

VISITORS TO INDIANA'S PRIVATE
COLLEGES AND UNIVERSITIES SPEND
\$33.4 MILLION A YEAR IN THE
LOCAL COMMUNITIES VISITED

Although expenditures of college visitors are extraordinarily difficult to measure with confidence, we computed an overall total of \$33.4 million, based on responses to student surveys, the relation between numbers of business visitors and the size of an institution's operating budget, and other factors. Visitor money is spent in the community in which the college or university is located.

VISITORS FALL INTO FOUR CATEGORIES
EACH WITH A DIFFERENT ECONOMIC IMPACT

Visitors can be conveniently categorized in four groups, each with its own visitation pattern and level of resulting expenditures in the local community:

1. Academic visitors who come to the campus to take part in academic meetings, look for teaching appointments, give lectures, and so forth,
2. Business visitors who come to sell their goods and services,
3. Recreational or cultural visitors who are drawn by sports, dramatic or musical productions, conventions, and the like,
4. Personal friends or relatives of students, faculty, and staff.

These visitors' spending patterns depend on the number of their visits, average length of stay per visit, and average amount of money spent each day. We estimated expenditures of these four classes of visitors. Subjective estimates were used where survey data could not be obtained. We believe our results are soundly if conservatively computed.

CHAPTER VI
MULTIPLIER EFFECTS

THE DIRECT EFFECTS OF EXPENDITURES
BY SCHOOLS, FACULTY, STAFF, STUDENTS
AND VISITORS HAVE FAR-REACHING
IMPLICATIONS FOR THE COMMUNITY

In this report, we have computed the overall in-state total of expenditures induced by the existence of private colleges and universities in Indiana to be in the order of \$169 million per year at fiscal 1973 levels of activity and prices.

This money does not stop in the hands of its first recipients, but continues to be passed from hand to hand in a long series of transactions that "multiply" its initial impact.

Thus, for each initial expenditure impact, there follows a chain of transactions that creates additional incomes, new jobs, more local tax revenues, and all manner of other economic effects. On the way through the local economy, some of these flows of money "leak" into non-local hands, or into cash balances that do not directly affect the local economy. For example, the money may be spent on items brought into Indiana from other states or from foreign countries. Eventually, the chain of transactions comes to an end. The sum of all its items is the total multiplier effect of the initial injection of funds that took place because of the existence of an educational institution in a certain place.

Multipliers can be thought of in more than one way. One concept is that of the "income multiplier" which we have been discussing above. This is a number that measures the extent to which initial expenditures are added to in the transactions that flow from them. Another notion is that of the "employment multiplier," that is, the corresponding number that describes job creation that flows from the expenditures indirectly. The two multipliers are closely related. Both are rather simple concepts and yet quite difficult to express accurately for any given locality at any specific time in its history.

THE INCOME MULTIPLIER EFFECTS
OF THE PRIVATE INSTITUTIONS OF
INDIANA TOTAL SOME \$252 MILLION

Table 3 of Chapter I describes the initial total impact of \$169.3 million in first-round expenditures induced by the private colleges and universities of Indiana. Of this total, an estimated \$152.4 million was spent locally.

In estimating the multiplier effect of these local and more widespread in-state expenditures, one has to allow for the differing degree of availability of materials and equipment in a college town and in the larger economy of the state. Indiana is a diversified industrial and agricultural state. Within its borders a wide range of goods and services can be purchased by colleges, their employees, students, and visitors. If the immediate community is a small town, however, then fewer goods and services will be available locally than if the immediate community is a large metropolitan area. There are variations on this theme. Goshen College, for example, may purchase a small proportion of its supplies and equipment in the Goshen community but may buy nearly all the rest from Northern Indiana.

Previous income-multiplier studies have confirmed the common-sense hypothesis that the multiplier effect of initial local expenditures increases with the size of the economic area being studied. That is, the more a community is self-sufficient, the more likely it is that initial local expenditures will continue to work their way through its structure and not leak out to other places.

John Caffrey and Herbert Isaacs¹ suggest that colleges conducting economic impact studies should use an income multiplier in the range of 1.5 to 1.66. Considering the

¹ John Caffrey and Herbert H. Isaacs, Estimating the Impact of a College or University on the Local Economy (Washington, D.C.: American Council on Education, 1971). See also B. W. Macy and R. Gustafson, The Impact of Private Colleges and Universities on the Economy of the State of Missouri, Project No. 3194-D (Kansas City, Missouri: Midwest Research Institute, September, 1968).

range of communities in this study, we have opted to use 1.6 as the income multiplier for local community expenditures and a higher figure of 2.0 for in-state outlays as a whole.

These two multipliers cannot, however, be applied directly to the primary data of tables 1 and 3 in the first chapter of our report, because the initial outlays were only partly financed by nonlocal or out-of-state funds. Therefore, an adjustment has to be made before the multipliers can be applied in our analysis.

The bulk of these funds, as we have noted before, comes from students in the form of tuition or from visitors who are relatives and friends of students. If all the students were out-of-state residents, then these funds would be made up of "outsider money," and no adjustment would be needed. However, about half of the private institutions' students are residents of Indiana. One could conclude that money spent by these students would still have been spent in the state even if the schools they were attending did not exist. In fact, however, given the strong denominational appeal of many of these institutions, we felt that a significant number of students would have gone out of state to schools of their denomination in preference to attending another institution just because it was located in Indiana, if the institution that could satisfy their need was not located in their home state. More specifically, we decided that of the 50 percent of students who were in-state residents, about one-half would have attended a college or university outside of Indiana, if the college of their choice did not exist in Indiana.

This conclusion of course affected our analysis and the magnitude of the economic impacts being measured. We first summed the measured expenditure impacts of the colleges, faculty and staff, students, and that portion of visitor expenditures that could be attributed to personal visitors. The assumption here was that these expenditures were student-related. This figure was then multiplied by 0.75, the proportion of these funds that represented "outsider money." This procedure reduced the overall in-state impact from \$169.3 million to \$127.0 million.

The reduction in the local impact, as distinct from the larger statewide impact, was much smaller. The student surveys indicated that only about 13 percent of the respondents were local residents. Application of the same procedure to the local data had the effect of reducing the direct local impact from \$152.4 million to \$132.6 million. Finally, both the statewide and local figures were reduced by \$1 million to account for the value of local business volume

unrealized because of the operation of business-type enterprises by the institutions.

Application of the multipliers to these adjusted figures yields the following results:

1. On in-state expenditures related to the colleges and universities, the product of $2.0 \times \$126$ million is \$252 million in overall statewide impact;
2. On local economic impact, the product of $1.6 \times \$132$ million is \$211 million, the total economic effect of the institutions on their surrounding communities.

The two multipliers are not additive. Each means something different, one about the state in general, the other about the sum of the local economies. The higher multiplier for the state reflects its diversified industrial, service, and agricultural economy.

The local income multiplier of 1.6 reflects the more restricted supply capabilities, on the average, of the individual college areas. On the other hand, the \$132 million basic impact figure to which the multiplier is applied reflects the fact that college-related expenditures may be inflows of funds originally from outside the local area but still from other places within the state as well as from out of state.

The formula for computing the multiplier contains a statement about the extent to which initial outlays are passed on (i.e., not leaked out to nonlocal or nonstate uses). The formula is usually expressed as $1/(1-r)$, where r is the proportion of each successive expenditure that is passed on within the economic area being studied. An Indiana multiplier of 2.0 implies a retention, in-state, of 0.5 on each transaction, or \$50 out of each \$100. Conversely, it also says that the other \$50 disappears each round, either into nonstate repositories, or into idle cash. A local area multiplier of 1.6 indicates a local-area retention of 0.375 on each turnover of money, or \$37.50 out of each \$100. Conversely, this suggests that out of each round of \$100 in expenditures after the initial injection, \$62.50 is taken out of local circulation in some fashion.

The multipliers we have used are supported by the literature and also appear to us to be reasonable in view of our knowledge of the Indiana economy.

THE EMPLOYMENT MULTIPLIER INDICATES
THAT THE 32 INDEPENDENT COLLEGES AND
UNIVERSITIES OF INDIANA CONTRIBUTE
INDIRECTLY TO EMPLOYMENT OF 20,000

The total 1972-73 employment in the 32 institutions in this study was 9,600. This figure includes a host of occupational categories ranging from a technical manuscript typist to assistant provost.

Just as an income multiplier can be used to project the ultimate income-creating effects of institutional and related expenditures, so the employment multiplier can be used to estimate the number of jobs that would be created or supported by the existence of the private sector in Indiana. The primary employment effects are matched by a secondary set of induced jobs created because of the existence of the first group.

Of course, we must use informed judgment in the selection of an employment multiplier. Studies have shown that such multipliers are typically close to 2, or slightly more than 2, for statewide economic areas. This suggests that the 9,600 jobs in the private higher education sector in turn lead to 20,000 additional jobs in the state's economy.

APPENDIX
METHODOLOGICAL NOTES

THE CONCEPT OF AN ECONOMIC IMPACT
STUDY FOCUSES ON IMMEDIATE AND
CONSEQUENT CASH FLOWS, NOT ON THE
SOCIAL VALUES OF EDUCATIONAL INSTITUTIONS
IN THE BROADER SENSE

The appearance in recent years of a number of economic impact studies reflects a growing interest in the total social role of colleges and universities. This interest extends in many directions. It comprehends the interfaces between town and gown, the growing contribution of institutions to nondegree educational programs, and new social service objectives, especially in the cities. Overall, college and university planning has come to include many aspects of institutional activity that would not have been considered even a decade ago.

One of the concerns of educational leaders, and of the townspeople in their local communities is the continued existence of a number of different kinds of tax-exempt organizations. These are headed in most places by the agencies of the state and federal governments and by the properties owned by the municipalities themselves for educational and recreational purposes. Also included are the lands of churches, hospitals, and of colleges and universities. The restricted tax base for real property levies in the present period of rising government costs has produced serious problems in many of the nation's cities and towns. Fiscal authorities, therefore, begin looking for fresh sources of tax revenues.

Economic impact studies have a political message. An educational institution, while it may have modest tax concessions, is a valuable business enterprise. It creates jobs; purchases buildings, equipment, and supplies; attracts students and visitors from afar; and probably also attracts state and federal grant funds. Hence, researchers attempt to measure the business aspects of colleges and universities, and their impact on the local economy.

This is not to say that the practical value of an educational institution rests mainly in these business aspects. In cultural as well as in long and short-range economic terms, an educational institution affects the quality of life in its community. Graduates who come from the locality often remain to profit from their education and to give improved services to their community. Thus, they are likely to improve the fortunes of their neighbors as well. Many cultural activities in music, the arts, and the theatre, would not be accessible

to townspeople without the contribution of the college faculty, staff and students. Aristotle, in reflecting on these things, observed that education is an ornament in prosperity and a refuge in adversity. As such it contributes many things of real but nonquantifiable substance. Most of these are well enough understood by the public, evidenced in its support of education. What is less well understood is that an educational institution is also an important local business enterprise that brings to the community benefits of a much more tangible, if prosaic, type than improvements in the quality of life.

RECOMMENDED STUDY PROCEDURES

In 1971, the American Council on Education published, Estimating the Impact of a College or University on the Local Economy by John Caffrey and Herbert H. Isaacs. This methodological study has been sponsored by the Exxon (then Esso) Educational Foundation for the same reasons we have outlined in the preceding section of these notes: that not enough members of the public were aware of the business implications of their local college or university. The corollary of this proposition is that not enough university people know how to conduct such studies in the evenhanded and comprehensive way that the subject demands.

The Caffrey-Isaacs report has inspired and guided dozens of studies like this one. As the authors themselves pointed out, their "models" for compilation of economic impact figures were to be guides for researchers and to be subject to modification where they were not deemed appropriate. We have modified their models and indicate the important modifications below.

From the basic methodology recommended, we have selected what has now become standard four-sector approach; that is, the cataloging of expenditures under four headings: (1) institutional, (2) faculty and staff, (3) students, and (4) visitors.

Adding to the Caffrey-Isaacs models, our approach has included capital outlays, which we consider should be included in cash-flow analysis.

In the following sections of this methodological note, we have described our approaches to the collection and analysis of information for the body of the report. These comments are important, because they explain what is included and excluded in the data in the main part of the report and how we made necessary judgments about the facts. For example, we explain in the case of schools not supplying survey data, how we estimated its information from that provided by similar schools. This, incidentally, is a common social research technique.

STUDY YEAR DEFINED

For obvious reasons, an economic impact study should deal with a recent fiscal period of institutional operations. We selected the freshest fiscal period, the fiscal year ended June 30, 1973. A few participating institutions had fiscal years ending in August or September. For these we took the latest completed period, ignoring the minor problem caused by lack of coincidence of the reporting periods.

LOCAL AREA DEFINED

We requested from each participating institution a definition of what it considered its local economic area. Guidelines were that the area should not cut across state boundaries and should coincide with a local governmental jurisdiction to facilitate compilation of data on the Caffrey-Isaacs "government model," dealing with tax payments and public service requirements. Most schools defined the local community in terms of the county in which they were located. Once the local community was so defined, expenditures by the college or university, its employees, students, and visitors were analyzed as being either within or outside this area. We emphasized expenditures (1) within the local area, and (2) outside this area in the rest of Indiana. In some instances, of course, this meant that significant amounts of institutional expenditure were not covered as in schools near the state border. It is also true that studies like this one have to be kept within reasonable bounds of the defined study area(s). In ours we have two, the local community and the state as a whole.

ALLOCATIONS

Although a college or university generally knows how much money it spends each year on various objects such as food services, supplies, repair and maintenance, equipment, construction, and so forth, its records do not usually specify where this money is spent. Moreover, the contractual addresses may not indicate the source of the goods or services; for example, a business machine may be bought from a local supplier but in fact comes from an entirely different place.

From available records, and with the help of the purchasing officers in charge of the various areas of procurement, reliable estimates were made of the expenditures actually made locally and elsewhere in the state.

The same kind of allocation problem arises in defining disposable incomes of faculty and staff--and to some degree students as well. Between gross pay and actual income received for subsequent spending, deductions occur for retirement funds, state or federal taxes, health insurance, charitable contributions, savings, and the like. These were eliminated from the analysis. Also eliminated were

any items in institutional operating statements referring only to transfers or internal payments. Since the impact of the expenditures of faculty and staff was to be dealt with separately, all monies paid them were excluded from our analysis of institutional expenditures. "Contributed services" in Roman Catholic schools were not included, because they are not in fact spent by the faculty as part of their personal income.

A few schools did not submit data pertaining to college expenditures. In these cases, we matched each of these schools with another college that we felt was located in a local community similar in population and in urban or rural characteristics and that had supplied us with the needed information. We then multiplied the local expenditures of the second institution by the ratio of the full-time enrollment of the first college to the full-time enrollment of the second.

OUT-OF-STATE STUDENTS AND VISITORS

While one Indiana community may gain and another lose on account of the student who goes away to school, the state as a whole gains a special kind of "export industry" from serving students and visitors who come from out of state to Indiana's private colleges and universities. Moreover, the drawing power of Indiana colleges and universities is such that a number of in-state residents go to school here who in other states might otherwise go to out-of-state centers for their postsecondary education. This happens in the reverse in Indiana, in that half of the state's private-sector scholars are from other states. As part of its general programs of economic development, therefore, the state can consider the private sector as one worthy of support.

COMPETITION WITH LOCAL ENTERPRISES

The Caffrey-Isaacs' position is that "colleges are in competition with other economic enterprises for the dollars of their constituents." This idea has to be interpreted with some care if it is not to be trapped by an ideological snare. From the standpoint of practical impact on the community, it does not matter if a business is owned by an educational institution or a private person, except in the matter of allocation of any profits made. One assumption, which may not be universally applicable, is that the college-owned business is as efficient in meeting customer needs as any private counterpart. Such an assumption cannot be evaluated in abstract terms but only in specific situations.

However, one of the usual characteristics of college businesses is that they are run for the benefit of the students. As a general rule, for example in bookstores, such college enterprises do not "make money".

From our standpoint, the important thing about a college-owned business is that it employs people, buys utilities, provides services that would not otherwise have been forthcoming. In short, it contributes like any other business to the welfare of the community.

The only deprivation that local citizens incur because of the existence of college-owned business is a lack of profit earnings to distribute to the owners of the business. In the case of most colleges and universities, this is a very small amount.

Even in gross terms, the total for the whole 32 institutions of this study worked out to an average of about \$30,000 per school, or a total of just under one million dollars.

This computation also includes an estimate of the amounts of money spent by local citizens on college-related functions that might otherwise have been noninstitutional. That is they might go to a movie instead of a college basketball game. The assumption, of course, is that the educational institution's function was not financed out of net savings.

TAX IMPLICATIONS

Most private colleges and universities enjoy an exemption from local property taxes. These exemptions are granted to encourage education. Each institution represents some burden on the local taxpayers which many colleges and universities offset by providing public-type services for themselves. Noteworthy examples are campus security, fire protection, road maintenance, counselling, and emergency health care.

Even where the local community provides most or all of these services, however, a difficult question of equitable analysis remains. One of the conundrums of American state-local financial analysis is how to value-analyze the allocation of municipal-type services to specific parcels of land in the taxing jurisdiction. Just how much does it cost to provide this or that block of people with fire and police protection, or education, or sanitary services and water? The answer does not come readily from available models of cost allocation. Hence, we cannot apply any tested formula to attribute municipal service costs to the tax-exempt institutions in this study. Such an analysis is far beyond the scope of our terms of reference.

In Indiana, private colleges and universities provide varying degrees of municipal-type services for themselves. The degree of self-service will be a function of the size and capability of the school. It will also be a product of history, and the evolution of specific year-by-year policies that provide convenient linkages between the municipality and the college on these matters. For example, the University of Notre Dame is largely self-sufficient in

South Bend because it provides for its own police and fire protection, garbage disposal, maintenance of public roadways, and roadway lighting. A smaller school in a smaller town might be different and probably would require a commensurately larger proportion of municipal-type services from the municipality. The trouble is that the value of these services is not readily ascertainable from manageable media of inquiry. Each situation calls for special study in light of local conditions. This is a subject that would indeed be worthy of further research, but cannot be explored fully in our study.

In the contemplation of costs and benefits to the general public from private educational institutions, more is involved than the obvious considerations of the costs of municipal-type services. Colleges and universities tend to "anchor" their neighborhoods against any surrounding forces of municipal decay. An economic impact study of the University of Pittsburgh¹ indicated this in a striking fashion, and the same ameliorating principle applies in Indiana. Assessments and hence tax revenues are likely to be higher in university areas than in others no different sociologically other than in their lack of the institutional support factor.

We have already referred to the services which a college or university provides for its community in apposition to the demands it makes on the citizens for basic municipal services. Here we are referring to the provisions of cultural, intellectual, and athletic programs, to the use of the campus as green space and a place to use for community functions, exhibitions, and so forth. Many of these important functions are provided at little or no cost, and as such represent a private provision of public services in lieu of their provision by the municipality. What price should be attached to such services? We have no formula for this. We cannot even make rough estimates of their value, but we do think that they are considerable, and more than counterbalance the imputed cost of municipal-type services provided by the town to the wearers of the gown.

FACULTY AND STAFF EXPENDITURES

As with college expenditures, to obtain information on local expenditures by faculty and staff we needed a total expenditure figure combined with a proportion of that total which was spent locally. Since such expenditures are not a matter of public record, it was necessary to secure the information through questionnaires supplemented by secondary sources.

¹ John Caffrey and George Mowbray, The Impact of the University of Pittsburgh on the Local Economy, U.S.O.E. Contract No. OEG-29-480725-1027, Project No. 80725 (Washington, D.C.: Educational Systems Research Group, April, 1972).

We used the top-down approach suggested by Caffrey and Isaacs in which the first step is securing data from college records on total salary outlays paid to faculty and staff. Fringe benefits were excluded since, for the most part, they either do not involve money outlays (e.g., free tuition for faculty children) or they reflect expenditures that have little, if any, local or state impact (e.g., retirement and disability contributions).

Several Catholic colleges and universities were included in this study, all of which have a significant number of members of religious communities on their faculty and staff. In accounting for their compensation, the usual approach taken by most Catholic schools is to record a competitive salary as an expense to the college. Normally, however, the bulk of this salary is either kept by the college or returned to the school by the religious community. In both cases, this transaction is recorded as a donation to the college. We, of course, were only interested in the money that was actually received and kept by the individual and his or her religious community. To include the total funds recorded in salary outlays would have resulted in significant double-counting since the bulk of those funds would be recorded as expenditures by the college.

The total salary outlay figure at each institution was then multiplied by 80 percent to derive an estimate of the total disposable income of faculty and staff. The 80 percent figure was suggested by Caffrey and Isaacs and is based on their view that, on the average, tax and other deductions (e.g., faculty contributions to retirement funds) are approximately 20 percent of gross salaries. This figure seems reasonable and is supported by the standard of living models developed by the Department of Labor. These models will be explained below.

We then assumed, continuing in the footsteps of Caffrey and Isaacs, that total expenditures by faculty and staff are equal to their disposable income. Our justification for using it differs somewhat from the reasons given by Caffrey and Isaacs. What we tried to measure was not the actual total expenditures of faculty and staff households, as Caffrey and Isaacs did, but the expenditures that could be ascribed to faculty and staff members by virtue of their position at the college or university. Income earned by spouses or other members of the family, for example, was excluded from consideration. However, income received from outside the college or university by a faculty member because of his or her professional skills, such as consulting income, was counted. One can safely assume that this is income that would not have been spent in the local community if it were not for the presence of the faculty member and, ultimately, the existence of the college or university in the local community. By assuming that the take-home pay received by faculty and staff members equalled their expenditures, we, in effect, assumed that the supplementary income noted above met, on the average, the savings needs of faculty and staff.

Having obtained an estimate of total expenditures by faculty and staff at each college or university, we divided this total into shelter and nonshelter expenditures, with shelter spending further broken down into (a) housing expenditures of homeowners, and (b) rental expenditures. Initially, we had hoped to derive this information directly from the faculty and staff questionnaire, but we felt that the responses we received on this one item were not reliable. Hence, we turned to the standard of living models developed by the Department of Labor for estimates of the percentage of total expenditure allocated to both shelter and nonshelter spending.²

These models determine the cost of maintaining a specified standard of living (low, intermediate, and high) in a specific geographical region of the United States during a particular period of time. We decided that the intermediate budget best reflected the standard of living enjoyed by faculty and staff as a group. For the North Central region of the United States during the autumn of 1972, the annual income needed to maintain this standard of living was about \$11,000. This figure squares quite well with our estimates of the average salary received by faculty and staff at all the institutions under study.

However, we were less interested in the absolute figures supplied by the government than in the derivation of shelter and nonshelter expenditures as a proportion of total consumption spending. In securing these percentages for schools located in lightly populated areas, we referred to the category entitled "Non-Metropolitan Areas in the North Central United States" consisting of areas with populations of 2,500 to 50,000. For schools located in metropolitan areas (i.e., populations over 50,000), we used data derived for Indianapolis, since the latter was the only metropolitan area in Indiana for which information on spending patterns at different budget levels was supplied. Therefore, we assumed that consumer expenditure patterns in South Bend, for example, corresponded reasonably well with those in Indianapolis. In addition, deciding whether an institution existed in a metropolitan or a nonmetropolitan area was at times a rather arbitrary choice. However, the data suggest that these assumptions and decisions did not make a significant difference in tabulating final spending estimates. The proportion of consumption expenditures allocated to nonshelter spending in metropolitan areas was 74.6 percent; the nonmetropolitan area equivalent at 76.2 percent was only slightly larger.

² U.S. Department of Labor, Bureau of Labor Statistics, 3 Budgets for an Urban Family of Four Persons, 1969-70, Supplement to Bulletin 1570-5 (Washington, D.C.: 1972).

We multiplied the percentages by the aggregate expenditures of the faculty and staff at each college. For example, estimated expenditures by faculty and staff at Butler University were \$3.6 million. Since Butler is located in the Indianapolis Metropolitan Area, we multiplied that figure by 74.6 percent. The result was \$2.7 million, our estimate of total nonshelter expenditures by faculty and staff at Butler.

The next step was to derive the local proportion of these nonshelter expenditures. Here, we relied on information directly supplied by responses to our questionnaire. Respondents were asked to estimate the proportion of spending in each category (food, clothing, etc.) within the local community. While we had some doubt about the validity of the question that asked for estimates of the absolute levels of local expenditures for each specific spending category, we felt the responses dealing with local proportions yielded reliable estimates. People have a better idea of the proportion of their expenditures which are local than the absolute levels of these expenditures. The relatively stable proportions derived for specific expenditure categories for faculty and staff at different colleges and universities supported this view.

Then, by using a weighted average procedure, we derived a single figure reflecting the proportion of total local expenditures by faculty and staff at each institution. To continue our illustration, the local proportion derived for Butler University was 78 percent. Multiplying this percentage by \$2.7 million yielded \$2.1 million, the estimated total local nonshelter expenditures by the faculty and staff at Butler University.

We calculated the corresponding state impact figure by simply assuming that all nonlocal faculty and staff spending took place within the state. This seemed a reasonable assumption for categories such as food and clothing. The only spending category treated differently was the one entitled "other expenditures," a residual grouping that included such items as vacation expenditures. Here we assumed that all spending not specifically designated as local was out-of-state spending. While this approach understated the statewide expenditure impact as far as this category was concerned, it was probably balanced by the obvious overstatement of the statewide impact with respect to the other spending categories. Applying this approach to our example, we calculated that faculty and staff at Butler made approximately 92 percent of nonshelter expenditures within the state. Multiplying the \$2.7 million by 92 percent yielded \$2.5 million, the estimated total statewide nonshelter expenditures by the faculty and staff at Butler.

We next turned our attention to shelter expenditures and differentiated homeowners and home renters. From our surveys, we secured estimates of the percentage of faculty and staff who own homes. At Butler, again, that figure came to 80.4 percent. We applied the percentage to the estimated total consumption expenditures of the Butler faculty and staff (\$3.6 million) to give the total consumption of homeowners. The proportion of total consumption expenditure allocation to the shelter costs of homeowners³ living at an intermediate budget level in the Indianapolis area is 28.0 percent (the nonmetropolitan percentage at this budget level is 25.6 percent). Thus, at Butler, the shelter costs of homeowners among the faculty and staff was computed to be \$813,000 in the study year 1972-73.

However, not all of the housing expenditures of homeowners have a local spending impact. We did not consider real estate taxes, for example. Moreover, principal payments on a mortgage were interpreted as savings and therefore excluded as well. The survey data suggested that, on the average, about 50 percent of total shelter costs could be attributed to principal payments and real estate taxes. We therefore reduced our initial estimates of the shelter costs of homeowners among the faculty and staff by one-half. At Butler, this reduced shelter expenditures to \$406,500. This result was multiplied by 96 percent, the estimated proportion of Butler's faculty and staff who live in the local area of the university, and led to a final figure of \$390,500, the countable local shelter expenditures of homeowners at Butler.

Obtaining information on the shelter costs of renters was relatively simple compared to getting similar information on homeowners. We multiplied total expenditures of faculty and staff by the estimated percentage of those who rent. We then multiplied the result by 17.5 percent, the Department of Labor's estimate of the proportion of total consumption expenditures spent on shelter costs by renters living in the Indianapolis Metropolitan Area (the nonmetropolitan proportion was 18.4 percent). This figure, the total rental expenditures of faculty and staff at Butler, was multiplied by 96 percent, the proportion of faculty and staff who live near the university, to produce the total local rental expenditures by the faculty and staff at Butler of \$119,000 in the study year.

Total local shelter expenditures of both homeowners and renters at Butler came to \$509,500.

³ Homeowner costs in the standard of living models include interest and principal payments plus taxes, insurance on house and contents, water, refuse disposal, heating fuel, gas, electricity and specified equipment and maintenance costs.

This figure, combined with estimated local nonshelter expenditures of \$2,102,000, indicates a total local impact of \$2,611,500.

We had previously obtained a statewide impact estimate for non-shelter expenditures of \$2,480,000 at Butler University. To this figure we added \$530,700, our estimate of statewide shelter expenditures. This estimate was based on the assumption that all non-local residents lived within Indiana. Adding these two figures together gave us just over \$3 million, our estimate of the total in-state impact of faculty and staff annual expenditures at Butler.

VISITOR SURVEYS

Since no one records the comings and goings of people on college campuses, we had to use a number of objective and subjective methods of estimating the impact of visitors to the institutions in this project. One technique was to relate the number of business visitors to institutional size, to estimate the influx of people to cultural and athletic events, to inquire about parental visit rates through student surveys, and so on.

The basic technique is to try to compute the number of visitors, the number of days on the average of their visits, and the amount of money they are likely to spend per day. On the latter point, we used \$25 as the per diem outlay per visitor--a compromise between the higher expenditure rates of adults and the lower ones of students' peer group friends. Where individual schools participating in the study submitted estimates of per diem expenditures, we used them.

In the report's main body, we have referred to a total of \$33.4 million for local visitor expenditures. The administrators of the participating colleges and universities will no doubt consider this too small, and it likely is. As in other studies of this kind, our figures simply cannot take into account all the different kinds of possible visitors. The problem is not in figuring out what an individual visitor of almost any kind is likely to spend but in identifying the visitor types and visitor days.

The Indiana figures, from a statistical standpoint, are heavily affected by the situation at Notre Dame. Not only is the University by far the largest such institution in the state, it also has an Athletic and Convention Center and a popular football program. Notre Dame's \$22 million in visitor-oriented programs represents 65 percent of the whole private sector on this dimension of economic impact. At the other institutions, the main manifestation of visitors was personal visitors to the students on campus or to faculty and staff members. At these schools, this kind of personal visitor accounted for 70 percent of the remaining expenditures in this category of impact.